

What the future holds for pharmacy

What will pharmacy look like in 10 years' time? Pharmacists, academics, policy makers and others interested in pharmacy's future gathered at a conference in London recently to gaze into their crystal balls. **Clare Bellingham** reports

Predicting the future is impossible. But when a group of senior pharmacists, academics and policy makers met recently to discuss what pharmacy will look like in 10 years' time, the same themes came up again and again. So it is a pretty safe bet that these themes will be central to pharmacy's future.

Supporting self-care and the development of chronic disease management were top of the list. Better use of IT, more integration with other health professionals and expansion in the use of diagnostics all featured. None of these is a great surprise. So it is good news for pharmacy that the groundwork for the future is already being done.

The conference organiser Beth Taylor, member of the NHS Modernisation Board, said that its aim was to paint a picture of future issues in health care so that pharmacists are equipped to respond. "I don't think it is possible to say 'this is what pharmacists will do'. That was clear from discussion groups at the event, particularly around IT where there is so much happening that we have to work with shorter timescales. The idea was to give people a better feel of when things might happen," she explained.

Trends and expectations

In order to understand what might be required of pharmacy in the future, participants at the meeting examined trends in health and patients' expectations. Life expectancy is increasing, and the population is ageing. The big question is whether the elderly of the future will be fit and healthy or frail and dependent, according to Candace Imison, head of whole systems strategy at the NHS Modernisation Agency. "The burden of disease is changing. There is a shift from acute to chronic disease," she said. Since 1991, prevalence of diabetes and osteoporosis has increased and, by 2030, 50 per cent of the population will be suffering from a long-term condition. This will place a significant burden on the health service.

A serious problem is that current lifestyles are simply not healthy and 60 per cent of the current burden of disease is linked to lifestyle factors. But the general public has yet to take this seriously. For example, only 13 per cent of the population eat the recommended five portions of fruit and vegetables a day yet 40 per cent eat biscuits on a daily basis. Rates of obesity have trebled in the past 20 years. And that is before mentioning the effects of smoking, excessive alcohol intake and illicit drugs.

Despite risky behaviour, people have increasing expectations around their health and what the health service will provide. "But will patients accept responsibilities for their own health as well as expecting rights," asked Ms

Imison. "In 10 years' time we will start to reap the consequences of the health risks people are taking now. We have a critical time in the next five years to develop models of care to cope with the potential increase in demand we will face in 10 years."

People's expectations about how care is delivered are also changing. "Young people have a completely different attitude towards the way in which technology is a part of their lives," said Harry Cayton, director for patients and the public, Department of Health. "So we absolutely have to embrace what technology is doing." He sees technology at the centre of future health care: patients making appointments online, downloading information from the internet and accessing their own health records online. In pharmacies, he sees the introduction of electronic transfer of prescriptions and monitoring of repeat prescriptions through pharmacies as major technological advances. "This would add enormous value for an increasingly mobile population who live and work in different places," he said.

Roles for pharmacy

So what will the future of pharmacy hold? "There will be much closer integration with the primary care team, better use of IT and a better contribution to health improvement and public health," according to Jim Smith, chief pharmaceutical officer, Department of Health. "One of my personal aims is for pharmacists' public health role to be anchored in the new pharmacy contract." He added that he believes pharmacists will be involved in supporting patients who are being treated with highly technical diagnostics and treatments and, at the same time, supporting other people through self-care. "As I see it, we will see a pharmacy service which is more focused on health inequalities and health improvement," he said.

One of the biggest changes happening in health care now is a new focus on chronic disease management (see *PJ*, 15 May, p601). "We are already well into the shift from individual acute care to chronic disease management," said Dr Smith. "Pharmacists will play a major role in chronic care because, let's face it, lots of chronic disease management is around medicines."

Dr Smith said that IT is central to the changes in pharmacy. "We are in the middle



of an IT revolution. It is the first time the NHS has tackled IT properly," he said. "The introduction of the national care record and ETP will revolutionise how we handle medicines. We are proposing that pharmacists have read-write access to the national care record dependent on their role and with patient consent. There will be a consultation on this but it is our firm intention. There will also be more automation in hospitals. Things have been slow around e-prescribing in hospitals and I hope this can be accelerated."

Other levers for change included the new community pharmacy contract, increasing the variety of locations and roles in which pharmacists worked, and the fact that more pharmacists are becoming prescribers. "There is a massive range of developments already in place. We now need to accelerate that and ensure that pharmacists do their bit around chronic disease management too," he said.

From a patient's viewpoint, Mr Cayton's prediction for the future is that pharmacists' main role will be in providing support for self-care. Patients want more control of their health, especially long-term conditions, he said. He advocated expert patient programmes to empower people to make decisions in how to manage their health care. "As patients take more control of their condition, they are more likely to take their medicines properly." But he said that patients need better information about health and help to know what questions they should ask about health. "Pharmacists are a group that patients feel comfortable talking to," he said. Another role for pharmacists is in ensuring that patients are given information about medicines, particularly risks associated with them, so they can make choices, he added.

Mentioning the POM to P switch of

Further information

Detailed proceedings from the "Pharmacy in the far future" meeting will be available on the internet later this week at www.pharmacyinthefuture.org.uk

simvastatin, Dr Smith said: "It is the first medicine for a long-term condition and I'm pretty sure there will be more. It has big implications for pharmacists. I won't dwell on the *Which?* report, as I have grave difficulties with it, but there is no doubt that *Which?* did uncover some examples of bad practice that we have to tackle as a profession."

Workforce

With the number of people aged over 65 years projected to be greater than the number of people aged under 16 in less than 10 years' time, there are concerns that demands on the health service will be too great for the number of people available to work in it. "These changing demographics mean that we will have to draw on new workforce pools and develop better models of care," said Ms Imison. "The current NHS model reflects the world of 1948 when doctors were doctors, nurses were nurses, and there was a focus on acute rather than chronic care." New approaches could be to offer chronic care in group appointments, make better use of remote care by e-mail or telephone, and use non-traditional care settings.

Whatever future roles for pharmacists are proposed, they can only be realised if there is a sufficient number of pharmacists to do the job.

A national pharmacy workforce review will be published later this year and preliminary results were presented at a recent conference in London. This coincided with the launch of this year's pharmacy workforce census by the Royal Pharmaceutical Society (see Panel below).

New medicines

Developments within the pharmaceutical industry will change the medicines that pharmacists work with in future. One of the most talked about of these is genomics, but there are plenty of other advances too.

Bill Dawson, research and development committee, Association of the British Pharmaceutical Industry, said that the next 10 years will be about making better use of existing medicines. The introduction of novel medicines to the market will increase in five to 15 years but it will not be until 10 to 20 years' time that genomic medicines really come good.

The delivery of genetic material into the body has been the big hold-up. Finding a good vector is key to the future of genomics. Although viruses work, they give side effects, so alternatives are being sought. Professor Dawson said that it is easier to get proteins into the body than DNA but that the science of proteomics is behind that of genomics.

What will make a difference in the near future is that pharmacogenetics will be applied to existing therapies, he said. It could be used to identify a genetic basis as to why people do or do not respond to a particular drug. "By genetically typing patients, you can tell them if a medicine will work for them in advance which is better than them trying it and discovering that it doesn't work," he explained. "This is a low-hanging fruit in research terms; something we can get at quickly," he said. Examples of drugs where genetic reasons for variations in response have already been identified are leukotriene antagonists and pravastatin.

He expected that more new drugs will be targeted for patients using diagnostics in a similar way to that used for trastuzumab. It is only effective in the 25 per cent of women who over-express a certain gene and this must be tested for before treatment is started. Without the test, it is unlikely that the drug would have been marketed since identifying the 75 per cent of people for whom it is ineffective would have been impossible.

A Government organisation that spends its time looking into the far future is Foresight. It aims to produce challenging visions of the future drawing on the experts in science, business and Government. One of Foresight's current projects that is relevant to pharmacy is the "Brain science, addiction and drugs" project. It is examining the medical and social effects of increased knowledge about the brain and how it can be influenced, including using legal and illegal drugs. Some of the questions it aims to address are: What are the psychoactive substances of the future? What else will be used to treat the brain in the future? Should drugs be used as cognitive enhancers to alter a healthy brain as well as to treat illness? Can a body be made to make its own drugs? Further information about Foresight is available at www.foresight.gov.uk.

Pace of change

Dr Smith concluded that nothing that had been talked about at the meeting was incompatible with the direction that had already been set in last year's Vision for Pharmacy. Whether or not the predictions are correct, one thing is for sure: the pace of change remains uncertain.

Pharmacy workforce issues: how the profession will change in 10 years' time

Later this year, the results of a national pharmacy workforce review will be published. It is expected to reveal how the workforce is changing and what the long-term impact of these changes will be. Part of the research has been the development of a model that will enable more accurate prediction of the effect of proposed policies on the workforce, explained lead author David Guest, professor of human resource management, King's College London, at a conference in London on 26 May. The review is sponsored by the Royal Pharmaceutical Society and the three national health departments.

Preliminary results from the review indicate that the greatest risk to the profession is pharmacists cutting their working hours. "There is no evidence of any significant planned exit of pharmacists from the profession. There are modest levels of planned internal moves within pharmacy but no dramatic shift from one sector to another," Professor Guest said. "However, there is some pressure to reduce hours, notably among those who give a high priority to work-life balance. This issue is perhaps the one about which we need to be most aware."

The data show that in five years' time, 80 per cent of those currently working as pharmacists expect to remain in pharmacy. Thirteen per cent of pharmacists expect to change sector in the next five years, 38 per

cent expect to change the organisation they work for and 53 per cent expect to change job. "A majority would like to extend their role upwards to do more interesting things but they also believe they have limited opportunities to do so," said Professor Guest. Constraints cited include (in priority order) a lack of time, workload, insufficient pay, lack of support from management and lack of trained support staff.

The Society's 2003 pharmacy workforce census revealed an increase in the number of pharmacists who are working part-time, so perhaps there is already a determination among pharmacists to cut their working hours. The census also showed that the proportion of pharmacists working in community pharmacy has decreased while hospital and primary care pharmacy have gained numbers. Overall, the register grew by 2.4 per cent last year. See p750 for a more in-depth look at results of the new census.

So what of the future? The new model cannot predict the future but it can be used to assess whether supply of and demand for pharmacists match, or if there is a risk of under- or over-supply. It incorporates data on demand, for example in community pharmacy this is based on prescription numbers and in hospital pharmacy on patient numbers. Supply information comes mainly from surveys and higher education statistics. Data are

then fed into the model and scenarios tested by altering the assumptions made. For instance, based on a scenario of an increase in the number of whole-time equivalent pharmacists from 27,000 now to 45,000 in 2013, if 10 per cent of the workforce reduced their working week by four hours, the number of whole-time equivalent pharmacists would drop to around 40,000 in 2013.

The research has highlighted particular questions around the supply of pharmacists. "The assumption from our work is that we have got to be fairly pessimistic about the possibility of pharmacists considered 'permanently lost' to return to the fold. So other sources of supply have to be found or there is a need to think more carefully about job redesign and skill mix," said Professor Guest. Perhaps pharmacists should be discouraged from quitting in the first place, he suggested. "Quite a lot could be done with human resource policies in organisations to increase pharmacists' commitment to the organisation and profession, particularly around improving work-life balance," he said.

The team has identified a number of propensities that pharmacists who leave the profession are likely to have, along with others for those who are more likely to reduce their hours or have a career break. These will be published in the report later this year.